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Claims:

1. A metered dose inhaler comprising means for receiving a pressurised medicament canister; and a
5 breath-actuated latch mechanism arranged in use to latch said canister in a depressed condition and further to release said latch in response to inhalation through the inhaler by a user, thereby releasing said canister from a depressed condition to dispense a metered dose.
- 10 2. An inhaler as claimed in claim 1 wherein said latch mechanism comprises a pivotally mounted latch arm operatively associated with a hinged flap arranged to rotate upon inhalation by a user.
- 15 3. An inhaler as claimed in claim 2 wherein said hinged flap is provided so as to close an air inlet to the inhaler.
- 20 4. An inhaler as claimed in claim 2 or 3 comprising means for positively restoring said flap to its rest position.
- 25 5. An inhaler as claimed in claim 4 wherein said flap is at least partially restored to said rest position by re-priming said latch mechanism.
- 30 6. An inhaler as claimed in claim 4 or 5 comprising an externally-operated actuator for restoring said flap.
- 35 7. An inhaler as claimed in claim 6 wherein said actuator comprises or is operated by a cover for the mouthpiece of the inhaler which is arranged to restore or to help to restore the flap when the cover is closed over the mouthpiece.
8. An inhaler as claimed in claim 6 or 7 said external actuator is arranged to apply a sealing force on the

flap.

9. A breath-actuated inhaler comprising a mouthpiece, a mouthpiece cover and an air inlet, the mouthpiece
5 cover being arranged such that as it is brought over the mouthpiece it acts on a flap to hold the flap in a position where it closes the air inlet.
10. An inhaler as claimed in claim 9 wherein said cover
10 acts to provide a sealing force on the flap.
11. An inhaler as claimed in any of claims 7 to 11 wherein a or the mouthpiece cover is arranged to form a guard over the air inlet to prevent inadvertent blockage
15 of the air inlet during inhalation.
12. An inhaler comprising a mouthpiece, a mouthpiece cover and an air inlet wherein the mouthpiece cover is movable from a first position in which it covers said
20 mouthpiece to a second position in which it forms a guard over said air inlet to prevent blockage thereof in use.
13. An inhaler as claimed in claim 11 or 12 wherein
25 said mouthpiece cover is pivotally mounted.
14. An inhaler as claimed in any preceding claim adapted so that when in use a canister is inserted into the inhaler, the interior of the inhaler is
30 substantially closed except for a mouthpiece and an air inlet.
15. An inhaler as claimed in any preceding claim comprising a dose counter for counting the number of
35 doses dispensed from said canister said dose counter comprising a counter member having a toothed track arranged substantially in a helix and means for

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incrementally advancing said counter member via said toothed track for each time a dose is dispensed from said canister.

5 16. An inhaler as claimed in claim 15 wherein said dose counter is operatively associated with said latch mechanism.

10 17. A metered dose inhaler for receiving a pressurised medicament canister and comprising a dose counter for counting the number of doses dispensed from said canister said dose counter comprising a counter member having a toothed track arranged substantially in a helix and means for incrementally advancing said counter
15 member via said toothed track for each time a dose is dispensed from said canister.

20 18. An inhaler as claimed in claim 16 or 17 comprising an escapement mechanism in which a reciprocating motion from depressing and releasing the canister is translated into an incremental rotary motion of the counter member.

25 19. An inhaler as claimed in claim 18 wherein the escapement mechanism comprises an escapement yoke comprising a pair of pawls which are arranged to engage with teeth on opposite sides of the toothed track when the canister is respectively depressed and released.

30 20. An inhaler as claimed in any of claims 16 to 19 wherein said dose counter is operatively associated with a canister latch mechanism.

35 21. A pressurised canister for dispensing a metered dose of fluid therefrom having a valve comprising a sliding nozzle member biased towards a rest position but moveable against said bias to a priming position in which a metering chamber is defined within the valve

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such that when said nozzle member is released a metered dose is dispensed, the valve further comprising a sliding seal delimiting said metering chamber and slidably relative to the nozzle member, said sliding seal being biased in use to reduce the volume of the metering chamber substantially to zero once the metering chamber has been vented to the atmosphere via the nozzle member.

22. A canister as claimed in claim 21 wherein the sliding seal is exposed to the pressure of the contents of the canister in order to apply at least some of the force required to move the seal.

23. A canister as claimed in claim 22 further comprising a spring within the valve to act on the sliding seal.

24. A canister as claimed in claim 23 wherein said spring is arranged to act between the nozzle member and the sliding seal to give a biasing force on the sliding seal relative to the nozzle member.

25. A canister as claimed in claim 23 or 24 comprising an intermediate collar between said spring and said seal.

26. An inhaler device adapted for use with a pressurised canister having a valve which dispenses a metered dose therefrom upon being released from a depressed condition.

27. A pressurised canister for a metered dose inhaler comprising a resiliently biased nozzle and arranged to dispense a metered dose of fluid from said nozzle upon releasing the nozzle from its depressed condition.

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28. A canister as claimed in claim 27 arranged to isolate said dose during the same actuation cycle as it is dispensed.

5 29. A pressurised canister for delivering a metered dose of fluid therefrom comprising a resiliently biased nozzle and arranged to isolate and deliver the same dose in a single actuation cycle.

10 30. A canister as claimed in claim 27, 28, or 29 arranged to isolate the dose during a depression stroke and dispense the dose during a release stroke.

15 31. A valve for a pressurised canister comprising a resiliently biased nozzle, said valve being arranged to isolate and deliver the same metered dose of fluid in a single actuation cycle.

20 32. A canister as claimed in claim 27 or 29 comprising a valve including a metering chamber and a hollow nozzle resiliently biased into a first position in which said nozzle is in fluid communication with the metering chamber, said nozzle being moveable against said resilient bias to a second position in which the
25 metering chamber is in fluid communication with the interior of the canister.

30 33. A valve for a canister said valve comprising a metering chamber, an inlet for fluidly communicating with the interior of a canister and a hollow nozzle resiliently biased into a first position in which the nozzle is in fluid communication with the metering chamber, but moveable against said resilient bias into a second position in which the inlet is in fluid
35 communication with the metering chamber.

34. A valve for a pressurised canister, comprising a

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resiliently biased nozzle, the valve being arranged to dispense a metered dose of fluid from said nozzle upon releasing the nozzle from its depressed condition.

- 5 35. An inhaler device comprising means for latching a canister in its depressed condition and means for releasing said latch upon inhalation by a user, thereby releasing said canister from its depressed condition.

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